CLAIMS

The listing of the claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) An apparatus for wireless duplex communication, comprising, a first optical transceiver having a first optical transmitter and a first optical receiver, a second optical transceiver having a first optical transmitter and a first optical receiver, the first and second optical transceivers being located at opposite ends of an optical communication line formed thereby, wherein the output of each of the optical transmitters is a diverging beam of incoherent electromagnetic radiation arranged to have a cross sectional diameter which is larger than the cross sectional diameter of the respective optical receiver at that point on the communication line at which the respective optical receiver is situated, wherein each of the optical receivers includes an optical condenser lens having a focal plane, a photodiode, and a diaphragm having an aperture and situated in the focal plane of the optical condenser lens between the optical condenser lens and the photodiode, wherein the distance Δ between the diaphragm and the photodiode is defined by $\Delta=bF/Dc$, where b is the diameter of a light-sensitive site of the photodiode, Dc is the diameter of the optical condenser lens, and F is a focal distance of the optical condenser lens, and wherein a beam angle θ characterizing the first transmitters and the first receivers is defined by $\text{Tan } 2\theta=a/F$, where a is the aperture of the diaphragm.

2. (Previously Presented) An apparatus as claimed in Claim 1 wherein the optical transmitter emits electromagnet radiation having a range of wavelengths.

3. (Previously Presented) An apparatus as claimed in Claim 2 wherein, the optical transmitter emits radiation in the range 800 to 900 nanometres.

4. (Previously Presented) An apparatus as claimed in Claim 1 wherein each optical transmitter comprises a light emitting diode (LED) providing a source of the diverging beam of incoherent electromagnetic radiation.

5. (Previously Presented) An apparatus as claimed in Claim 4 wherein each optical transmitter comprises the LED and further comprises at least one optical condenser lens, the input to the optical condenser lens being provided by the LED and the output of the optical transmitter being provided by the optical condenser.

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